Amendments to the Specification:

Please replace the paragraph beginning at page 10, line 10 and ending on page 11, line 9, with the following amended paragraph:

Next, the simulation of a fixed combination of promotion and Segment is defined as a SIM1 function. For example,

SPlus>SIM1(N = 1000., Customer.Group. ID = "C1",
Promotion.ID = "P1", Spec = Spec.sdat)

The SIM1 function simulates the on-line shopping activities, and the returned process value is to be used as a proxy for real on-line shopping data. There are many underlying patterns or customer behaviors that can be built based on econometric modeling experiences. Suppose a customer visits a shopping site. There are many products advertised on the site. For any single product, with the on line sales price information, and customer's knowledge, the customer can deduce the DiscountPercentageToOffline. The customer will then decide if he or she will get a good offer based on the utilities derived from all the information. The customer may or may not see the ad, and may or may not select the product, and may or may not finally buy it. For each corresponding step, a (conditional) logistic regression model is used to generate the process. The choice of logistic regression model is based on the maximum utility theory developed in the demand model. For example, one can model:

$$P(Buy = 1 \mid Select = 1) = \frac{\exp(\beta' X)}{1 - \exp(\beta' X)}$$

$$[[\ P?Buy?1 \mid Select?1??\frac{\exp??'X?}{1?\exp??'X?}\ ]]$$

where X is a vector of vector: $X = (X_1; X;_2 X_3), X_1$ is the customer profile information vector, X_2 is the promotion attribute vector, and X_3 is the product

attribute vector. The following distributional property has been used: If $X_1 \sim B(1; p_1), X2 \sim B(1; p_{21})$, independently distributed, then $Y = X_1 X_2 \sim B(1; p_2)$, where $p_2 = p_1 p_{21}$.